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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/247,418	02/10/1999	HOLGER EGGERS	MO-5041/WW-5	7618

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William C. Gerstenzang, Esq.
Norris, McLaughlin & Marcus, P.A.
220 East 42nd Street - 30th Floor
New York, NY 10017

EXAMINER

KRUER, KEVIN R

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 09/27/2002

24

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/247,418

Applicant(s)

EGGERS ET AL.

Examiner

Kevin R Kruer

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 02 July 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 2-10, 12-24 and 26-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-10, 12-24 and 26-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

NOTE: In view of Applicant's comments on page 3 of paper #25, the term "of the weight per area of said (l)" will be interpreted for the rest of prosecution to refer to the area of a plane horizontal to the plane in which the film was extruded.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 31, 2, 3, 6-10, 13, 15, 17, 18, 19, 20, and 23, are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobreski et al. (US 5,334,428). Dobreski teaches a coextruded thermoplastic stretch wrap film comprising two outer layers and at least one intermediate layer placed between the outer layers. The stretch wrap film may be oriented or non-oriented (col 9, lines 17-20). The intermediate layer includes a low melt index linear low density copolymer of ethylene and a minor amount of at least one alpha olefin having from 4 to 10 carbon atoms. Particularly preferred alpha olefin copolymers include octene and hexene (col 6, lines 24-38). The low melt index polymer has a melt index of between 0.5 to about 2.5, and a density of 0.890-0.940 g/cc.

At least one of the two outer layers includes high melt index linear low density copolymer of ethylene and a minor amount of at least one alpha olefin having from 4 to 10 carbon atoms. The high melt index LLDPE has a melt index of greater than about 2.5 (abstract), preferably 2.8-5.0 (col 7, lines 65+), and a density of 0.89-0.94g/cc. The LLDPE resin can be blended or alloyed with minor amounts of EVA, HPLDPE, other LLDPE (col 8, lines 5-12), pigments, and dyes (col 8, lines 31-36).

The second outer layer may comprise a non-cling layer (col 8, line 53). Thus, the film is asymmetrical.

The cling film may be clung to itself (col 5, line 35+), in which case the outer layer (having the high melt index) is laminated to an adjacent cling film. The examiner takes the position that said adjacent claim film would read on the claimed substrate.

The film has a total thickness of 10-63 microns wherein the intermediate layer (a.k.a. outer ply) comprises 0.1-60microns (col 8, lines 41-51). The outer layers comprise 10-95% of the total gauge thickness of the film (col 8, lines 41-51). Since the densities of the high and low melt index films are similar, the examiner takes the position that the teachings of Dobreski are inclusive of films wherein the high melt index film comprises at least 40% of the weight per area of the laminate. The courts have held that in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art a prima facie case of obviousness exists. *In re Wertheim* 541 F.2d. 257, 191 USPQ 90 (CCPA 1976).

3. Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobreski et al. (US 5,334,428), as applied to claims 31, 2, 3, 6-10, 13, 15, 17, 18, 19, 20, and 23 above, and further in view of Simmons (US 5,273,809). Dobreski is relied upon as above, but does not teach the composition of the non-cling layer. However, Simmons teaches that non-cling layers of stretch wrap films commonly comprise propylene, polyester, and polyamide (col 4, lin54-col 5, line 16). Therefore, it would have been obvious to one of ordinary skill in the art to utilize propylene, polyester, or polyamide as the non-cling layer of the laminate taught in Dobreski because teaches that such films are commonly used in the art as non-cling layers of stretch wrap films. The courts have held that the selection of a known material based on its suitability for its intended use supports a prima facie case of obviousness. *Sinclair & Carroll Co. V. Interchemcial Corp.* 325 U.S. 327, 65 USPQ 297 (1945).

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4. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dobreski et al. (US 5,334,428), as applied to claims 31, 2, 3, 6-10, 13, 15, 17, 18, 19, 20, and 23, above.

Dobreski is relied upon as above. Specifically, Dobreski teaches that the ethylene (co)polymers may be catalyzed with coordination-type catalysts, but does not explicitly teach the use of metallocene coordination type catalyst. It would have been obvious to one of ordinary skill in the art to utilize a metallocene coordination catalyst because such catalysts allow for better composition distribution, molecular weight distribution, crystallinity, optical properties, toughness, processability, melt viscosity, heat sealability characteristics and superior randomization of the copolymer.

5. Claims 31, 2-10, 12, 13, 14, 17, 18, 19, 23, 26, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paleari et al. (US 6,110,570) in view of Hodgson, Jr (US 5,206,075). Paleari teaches a multi-layer heat shrinkable film comprising (a) a heat sealable layer, (b) an inner layer comprising a polymer selected from the group consisting of ethylene-vinyl acetate containing 4-28% (preferably 9-19%) by weight of vinyl acetate and a fractional Melt index, and ethylene-alkyl acrylate copolymers containing from 9-28% by weight of alkyl acrylate units and with a fractional melt index (abstract). When ethylene vinyl acetate is used as the inner layer, the melt index is less than 1.0, preferably less than 0.5, more preferably less than 0.40, and most preferably less than 0.35g/10min (col 6, lines 31-38). When ethylene alkyl acrylate is used as the inner layer, the melt index is less than 1.0 (col 3, line 15), preferably less than 0.7, more preferably less than 0.50, and most preferably less than 0.35g/10min (col 6, lines 31-38). Any layer of the laminate may contain stabilizers, anti-oxidants, pigments, UV absorbers, etc (col 7, lines 35-40). In particular, the heat seal layer may contain slip and anti-block additives (col 7, lines 41, 42). The laminate may contain further layers such as PVDC, EVOH, PVOH, PA, etc. (col 7, lines 15-20) and is oriented (col 10, line 16).

The overall thickness range of the laminate is 50-100microns, wherein the heat seal (a) is at least 6-30microns, and the inner layer (b) has a thickness of preferably 10 or higher (col 9, lines 51-59). The examiner takes the position that such thickness ranges and densities are inclusive of Applicant's claimed "weight per area of said (I)." The courts have held that in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art a prima facie case of obviousness exists. *In re Wertheim* 541 F.2d. 257, 191 USPQ 90 (CCPA 1976).

Paleari teaches that the heat seal layer (a) may comprise the heat seal material disclosed in Hodgson. Hodgson teaches a heat seal composition comprising a very low density ethylene copolymer having a density of 0.88-0.915g/cc, a melt index in the range of 0.5-7.5g/10min, and a single melting point in the range of about 60-115°C (abstract). Most preferably, the melt index is 1.0-2.5g/10min (col 4, lines 59-68) and the Mw/Mn is in the range of 1.5-3.5 (col 5, line 1). The polymer is metallocene catalyzed (col 5, line 61) and comprises monomers such as butene, hexene, octene, propylene, etc. (col 4, lines 37-48). It would have been obvious to one of ordinary skill in the art to utilize the heat seal composition taught in Hodgson as the heat seal composition of the laminate taught in Paleari because Paleari teaches that such a composition is preferred as the heat seal layer.

When the film is heat sealed, the examiner takes the position that said heat seal layer (the layer with the higher melt flow index) is adjacent to a substrate.

The melt flow of the preferred heat seal composition (1.0 g/10min) is three times greater than the preferred melt index of the inner layer composition (0.35g/10min). With respect to claim 12, Paleari teaches (in example 1) a laminate comprising a heat sealable layer, an inner layer (b), an inner layer (c), and an outer layer (d), wherein the melt indexes of (b), (c), and (d) are all lower than the melt index of the heat sealable layer.

6. Claims 31, 2-11, 13, 15, 17-21, 23, 26-28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chum et al. (US 5,089,321). Chum teaches a multi-layer thermoplastic

film structure comprising at least one heat sealable outer layer (a) and at least one core layer (B) (col 2, lines 55-59). Layer (A) is a linear polyethylene having a melt index of about 2 to about 20g/10minutes, preferably 3-10g/10min (col 4, line 31), and a density of from about 0.88 to about 0.92g/cc (abstract). Layer (B) is a linear polyethylene having a melt index from about 0.05 to about 5g/10min, preferably 0.2-1g/10min (col 4, line 34), and a density of about 0.88-0.94g/cc (abstract). Thus, Chum teaches that the melt index of layer (a) is preferably at least twice as much, and preferably 3 times as much as the melt index of layer (b). Layer (b) may comprise a blend of polyethylenes (col 4, lines 45-54). Furthermore, either layer may comprise additives such as pigments (col 4, line 55). The laminate comprises 2-70 layers (col 2, line 63) and is preferably oriented (col 3, line 13). Additional layers (which read on applicant's claimed "substrate" of claim 26) include EVOH, PVC, PVDC, nylon, and the like (col 3, line 33).

Chum does not teach that the inner layer should comprise at least 40% of the weight per area of the laminate. However, Chum does teach that the final product has a thickness of 0.1-50mils (col 3, line 18), wherein the thickness of the individual films may vary. It would have been obvious to one of ordinary skill in the art to vary the thickness of the various layers of the laminate in order to optimize the film's heat sealability and shrinkage. By optimizing the thickness, the "weight per area of said (l) is also optimized.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chum et al. (US 5,089,321), as applied to claims 31, 2-11, 13, 15, 17-21, 23, 26-28, and 30 above. Chum is relied upon above. Specifically, Chum teaches that pigment may be added to either layer (a) or (b) but does not disclose the use of calcium carbonate as a pigment. However, calcium carbonate is known in the art as a pigment. Thus, it would have been obvious to one of ordinary skill in the art to utilize calcium carbonate as the pigment taught in Chum because calcium carbonate is known in the art as a functional equivalent to the pigment taught in Chum. Furthermore, it

would have been obvious to vary the amount of calcium carbonate added to the layers of the laminate taught in Chum in order to obtain the desired visual effect.

Response to Arguments


The examiner would like this opportunity to respond to some of Applicant's arguments regarding the above rejections. Specifically, Applicant argues that the composition of Hodgson should be the inner layer of the Paleari laminate. The examiner respectfully disagrees. Paleari specifically states that the composition taught in Hodgson may be utilized as the heat seal layer of the taught laminate. Therefore, one of ordinary skill in the art would have been motivated to utilize the composition taught in Hodgson as the heat seal layer (layer (a)), not the inner layer (b).

Applicant further argues that the MFR taught in Hodgson is 100 times higher than indicated by the examiner. The examiner respectfully disagrees. Hodgson's MFR are disclosed in the units of dg/min. The MFR of the claimed invention and of the laminate taught in Paleari are disclosed as g/10min. The examiner points out that $1 \text{ g/10min} = 1 \text{ dg/min}$. Thus, if the MFR of Hodgson were converted to g/10min, the numerical value would be identical to that disclosed in Hodgson.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is (703) 305-0025. The examiner can normally be reached on Monday-Friday from 7:00 a.m. to 4:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703)305-5436. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.


Kevin R. Kruer


Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700